	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L2	0	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (duplicat$4 or mirror$4) same (SCSI or interfac$4)).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:14
2	BRS	L3	6	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (duplicat$4 or mirror$4) same (SCSI or interfac$4)).ab.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:14
3	BRS	L4	0	("2005/0125616").URPN.	USPAT	2006/05/02 06:15
4	BRS	L1	76	(initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (duplicat$4 or mirror$4) same (SCSI or interfac$4)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 07:05

	Type	L #	Hits	Search Text	DBs	Time Stamp
5	BRS	L5	0	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same (SCSI or interfac$4)).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:21
6	BRS	L6	4	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same (SCSI or interfac$4)).ab.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:25
7	BRS	L7	31	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (mirror$4)).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:26
8	BRS	L8	7	((initiat$$ or target$4 or nexus) same (time or short$4 or decreas$4) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same group$4).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:30

	Type	L #	Hits	Search Text	DBs	Time Stamp
9	BRS	L9	31	((initiat$$ or target$4 or nexus) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same group$4).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:42
10	BRS	L10	1	((initiat$$ or target$4 or nexus) same (leader) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same group$4).clm.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:42
11	BRS	L11	1	((initiat$$ or target$4 or nexus) same (leader) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same group$4).ab.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:43
12	BRS	L12	1	((initiat$$ or target$4 or nexus) same (messag$4) same (arbitrat$4 or select$4 or choos$4) same (mirror$4) same group$4).ab.	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:46

	Type	L #	Hits	Search Text	DBs	Time Stamp
13	BRS	L13	1	"20050125616"	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:47
14	BRS	L14	1	13 and (carrier or wave or signal or transmi$5)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 07:01
15	BRS	L15	1	13 and (instruction$2 or code or program)	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 06:49
16	BRS	L16	2426	711/162	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 07:05

	Type	L #	Hits	Search Text	DBs	Time Stamp
17	BRS	L17	1	1 and 16	US-PGPUB; USPAT; EPO; JPO; IBM_TDB	2006/05/02 07:05

US-PAT-NO: 6665780

DOCUMENT-IDENTIFIER: US 6665780 B1

TITLE: N-way data mirroring systems and methods for using the same

DATE-ISSUED: December 16, 2003

US-CL-CURRENT: 711/162, 711/112 , 711/156

APPL-NO: 09/684807

DATE FILED: October 6, 2000

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Claims Text - CLTX (12):

12. A method for N-way mirroring of data, comprising: selecting an initiator storage, the initiator storage having data that is to be protected; selecting a group of storage, each storage in the group of storage being configured to obtain an initial copy of the data of the initiator storage that is to be protected; detecting a modification occurrence in the data that is to
be protected in the initiator storage; wherein when the modification is detected, the method includes: preventing further modifications to the initiator storage; ascertaining a number N, the number N being equal to a sum
of each storage of the group of storage; decrementing the number N each time
one of the storage in the group of storage is updated with the copy of the modification; enabling further modifications to the initiator storage once the
number N is equal to zero, the number N being equal to zero being indicative of
each of the storage of the group of storage having a consistent copy of the data of the initiator storage that is to be protected; and notifying each of

the storage of the group of storage of the modification occurrence, the notifying being performed without transmission of a modification corresponding to the detected modification occurrence; wherein the notifying is configured to cause each of the storage of the group of storage to independently obtain the modification corresponding to the detected modification occurrence from the initiator storage without assistance from the initiator storage so as to maintain data consistency between the initiator storage and the group of storage.

PGPUB-DOCUMENT-NUMBER: 20050015407

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20050015407 A1

TITLE: System and method of relational configuration mirroring

PUBLICATION-DATE: January 20, 2005

US-CL-CURRENT: 707/200

APPL-NO: 10/622277

DATE FILED: July 17, 2003

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Summary of Invention Paragraph - BSTX (8):

[0006] U.S. Patent Application Publication No. US 2002/0103969 A1, entitled "Mirroring Agent Accessible To Remote Host Computers, And Accessing Remote Data-Storage Devices, VIA A Communications Medium," discloses a hardware-based mirroring agent that provides a LUN based input/output (I/O) interfaced to remote host computers including mirrored LUNs. The hardware-based mirroring agent is similar to a disk array, but manages and provides to host computers an interface to remote data storage devices. Available to the mirroring agent are the location, addresses, remote data storage devices and/or specifications of mirror relationships to set up and initialize through a configuration and administration interface. The mirroring agent then provides a LUN-based interface to the remote data storage devices via a communications

**medium to
host computers. The host computer can remap remote devices accessible via the
communications medium via an automated discovery process, during which updating
of the volume manager tables or host I/O tables occur. The mirroring agent establishes and synchronizes groups of mirrored data storage devices using
well-known disk mirroring techniques. However, the processes of setting up the
hardware-based mirroring agent are error prone and time consuming. It is a
manual process and not an automatic process. The mirroring agent requires
human intelligence to select the source and target volumes of the mirroring.**